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| 10/600,184 | 06/20/2003 | Lingaraj S. Patil | FORE-100 | 1353 |

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EXAMINER

CHO, HONG SOL

ART UNIT

PAPER NUMBER

2616

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/600,184 | Applicant(s) PATIL ET AL. | |
| | Examiner Hong Cho | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 29-49 and 52 is/are rejected.
- 7) ☒ Claim(s) 27, 28, 50 and 51 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract is objected because it just states the statements of claim preambles. It should be narrative of the invention.
2. The disclosure is objected to because of the following informality:
SPVx should be spelled out.

Claim Objections

3. Claim 2 is objected to because of the following informality:
Re claim 2, SPVx should be spelled out.

Claim Rejections - 35 USC § 112, Second paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 6-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 6, line 13, there is insufficient antecedent basis for “the alternate source switch”.

Claims 7-13 are similarly rejected.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 14-17, 22, 30, 31 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kajitani et al (US 6643254), hereinafter referred to as Kajitani.

Re claim 14, Kajitani discloses rerouting a route to alternate route in case of fault (*a system for responding to failures of connections in a network*, column 16, lines 52-55). Kajitani discloses a node N1 (*a primary source switch*) connected to a terminal point T1 (*a primary source node*), providing connection to N2 and N3 (*a primary source switch having multiple re-route options*), a terminal point T2 (*a primary destination node*), a node N8 (*a primary destination switch*) connected to the terminal point T2. Kajitani discloses establishing a connection from T1 and T2 via N1, where N1 provides an alternate route to T3 via N2 in case of failure of segment A (*the primary source node establishing a single end-to-end connection across the network between the primary source node and the primary destination through the primary source switch, the primary*

source switch re-routing the connection across the network along one of the multiple re-route options by maintaining just one end-to-end connection between the primary source node and the primary destination node when the single end-to-end connection fails, figure 11; column 16, line 60 to column 17, line 15).

Re claim 15, Kajitani discloses the node N8 setting up alternate connection when the fault occurs on the primary route (*the primary destination switch releases the single end-to-end connection after there is a fault detected on single end-to-end connection,* column 16, lines 60-63).

Re claim 16, Kajitani discloses primary source switch making multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path (column 10, lines 5-10).

Re claim 17, Kajitani discloses N1 rerouting the connection to an alternate destination node via an alternate route (*primary source switch redirects automatically the SPVx connection to the alternate destination node,* figure 11).

Re claims 22 and 30, Kajitani discloses rerouting a route to alternate route in case of fault (*responding to destination failures involving SPVx connections,* column 16, lines 52-55). Kajitani discloses a terminal point T1 (*a primary source node*) connected to a terminal point T2 (*a primary destination node*) via a node N1 (*a primary source switch*) (*forming an SPVx connection between a primary source node and a primary destination switch,* figure 11). Kajitani discloses detecting a faulty network elements (*detecting a failure on a primary path having the primary source node,* column 16, lines 52-54) and rerouting the connection to an alternate route (*re-establishing automatically the SPVx*

connection along an alternate path having the primary destination node, column 16, lines 54-55).

Re claim 31, Kajitani discloses primary source switch making multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path (column 10, lines 5-10).

Re claim 37, Kajitani discloses a terminal point T1 (a primary source node) connected to a terminal point T2 (a primary destination node) via a node N1 (a primary source switch) (establishing a single end-to-end connection across a network between a primary source node and a primary destination node with multiple re-route options, figure 11). Kajitani discloses detecting a faulty network elements (experiencing a failure in the connection) and, column 16, lines 52-54) and rerouting the connection to an alternate route including T1, T2 and N1 (re-routing the connection across the network along one of the multiple re-route options by maintaining just one end-to-end connection between the primary source node and the primary destination node, column 16, lines 54-55).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 32-34 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Saleh et al (US 20030179700), hereinafter referred to as Saleh.

Re claim 1, Kajitani discloses rerouting a route to alternate route in case of fault (*a system for responding to destination failures involving SPVx connections*, column 16, lines 52-55). Kajitani discloses a terminal point T1 (*a primary source node*), a node N1 (*a primary source switch*) connected to T1 providing connection to N2 and N3 (*producing an SPVx connection, the primary source node in communication with the primary source switch*), a terminal point T2 (*a primary destination node*), a node N8 connected to the terminal point T2 (*a primary destination switch receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node*), and a terminal point T3 (*an alternate destination node*) in figure 11. Kajitani fails to disclose forming an alternate path by connecting the primary source node and the alternate destination node only after the primary path experiences a failure. Saleh discloses a node restoring a primary path to a secondary path (figure 11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the node N8 of Kajitani to implement the function of provisioning a working path (connection from N8 to T2) to a protection path (connection from N8 to T3) in case of link failure on the working path so that end-to-end connection from one terminal point to another would be maintained.

Re claim 2, Kajitani discloses the node N8 setting up alternate connection when the fault occurs on the primary route (*the primary destination switch releases the single end-to-end connection after there is a fault detected on single end-to-end connection*, column 16, lines 60-63).

Re claim 3, Kajitani discloses primary source switch making multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path (column 10, lines 5-10).

Re claim 4, Kajitani discloses N1 rerouting the connection to an alternate destination node via an alternate route (*primary source switch redirects automatically the SPVx connection to the alternate destination node*, figure 11).

Re claims 32, 34, 38, 39 and 41, Kajitani discloses all of the limitations of the base claim, but fails to disclose detecting a failure in the primary destination node and redirecting automatically the connection to an alternate destination node. Saleh discloses a node restoring a primary path to a secondary path (figure 11) in case fault in a primary path. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the node N8 of Kajitani to implement the function of provisioning a working path (connection from N8 to T2) to a protection path (connection from N8 to T3) in case of link failure on the working path so that end-to-end connection from one terminal point to another would be maintained.

Re claims 33 and 40, Kajitani discloses the node N8 setting up alternate connection when the fault occurs on the primary route (*the primary destination switch*

releases the single end-to-end connection after there is a fault detected on single end-to-end connection, column 16, lines 60-63).

Claims 5, 35, 36 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Saleh and further in view of Shabtay et al (US 7093027), hereinafter referred to as Shabtay.

Re claims 5, 35, 36, 42 and 43, Kajitani and Saleh disclose all of the limitations of the base claim, but fail to disclose the primary source switch re-establishing the SPVx connection to the primary destination node when the failure condition clears. Shabtay discloses returning the traffic from one recovery path back to the working path (column 9, line 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Saleh to implement the switchover function of Shabtay so that a given alternate path would be utilized for restoring other working path.

Re claim 44, Kajitani discloses primary source switch making multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path (column 10, lines 5-10).

Claims 6-10 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Pelissier et al (US 6661773), hereinafter referred to as Pelissier.

Re claims 6 and 7, Kajitani discloses rerouting a route to alternate route in case of fault (*a system for responding to destination failures involving SPVx connections*, column

16, lines 52-55). Kajitani discloses a terminal point T1 (*a primary source node*), a node N1 (*a primary source switch*) connected to T1 providing connection to N2 and N3 (*producing an SPVx connection, the primary source node in communication with the primary source switch*), a terminal point T2 (*a primary destination node*), a node N8 connected to the terminal point T2 (*a primary destination switch receiving the SPVx connection, the primary destination node in communication with the primary destination switch, the connection following a primary path between the primary source node and the primary destination node*), and a terminal point T3 (*an alternate destination node*) in figure 11. Kajitani fails to disclose an alternate source node, the alternate source switch re-establishing automatically the connection to the primary destination node along an alternate path when the primary source switch detects a failure of the primary path, the alternate path formed by the alternate source node and the primary destination node only after the primary path experiences a failure. Pelissier discloses a redundant node C (*an alternate source node*) and a switch SW2 (*an alternate source switch*) and establishing a connection from node C to node B in figure 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani to have a redundant source node so that in case of link failure on the working path end-to-end connection from one terminal point to another would be maintained through a redundant path.

Re claims 8 and 24, Kajitani discloses all of the limitations of the base claim, but fail to disclose alternate source switch re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source node fails.

Pelissier discloses a redundant node C (*an alternate source node*) and a switch SW2 (*an alternate source switch*) when a primary source switch fails and establishing a connection from node C to node B (*a primary destination node*) in figure 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani to have a redundant source node so that in case of node failure on the working path end-to-end connection from an alternate node to an destination node would be maintained through a redundant path or switch.

Re claims 9 and 25, Kajitani discloses all of the limitations of the base claim, but fail to disclose alternate source switch re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source node fails. Pelissier discloses establishing a connection from a redundant node C (*an alternate source node*) to node B via a switch SW2 (*an alternate source switch*) when a primary link fails. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani to have a redundant source node so that in case of link failure on the working path end-to-end connection from one terminal point to another would be maintained through a redundant path.

Re claims 10 and 26, Kajitani discloses all of the limitations of the base claim, but fail to disclose alternate source switch re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source node fails. Pelissier discloses a redundant node C (*an alternate source node*) and a switch SW2 (*an alternate source switch*) when a primary source switch fails and establishing a connection from node C to node B in figure 3. It would have been obvious to one having ordinary

skill in the art at the time the invention was made to modify the system of Kajitani to have a redundant source node so that in case of link failure on the working path end-to-end connection from one terminal point to another would be maintained through a redundant path.

Re claim 23, Kajitani discloses all of the limitations of the base claim, but fails to disclose communicating between a primary source switch in communication with the primary source node and a alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node. Pelissier discloses a switch SW1 (*a primary source switch*) in communication with a node A (*the primary source node*) and a switch SW2 (*an alternate source switch*) in communication with a node C (*an alternate source node*) to identify to the alternate source switch there is a failure in regard to the primary source node. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani to implement the redundant system of Pelissier so that in case of link failure on the working path or node failure end-to-end connection from an alternate node to an destination node would be maintained through a redundant path or switch.

Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Pelissier and further in view of Shabtay.

Re claims 13 and 29, Kajitani and Pelissier disclose all of the limitations of the base claim, but fail to disclose the primary source switch re-establishing the SPVx

connection to the primary destination node when the failure condition clears. Shabtay discloses returning the traffic from one recovery path back to the working path (column 9, line 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Pelissier to implement the switchover function of Shabtay so that a given alternate path would be utilized for restoring other working path.

Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Shabtay.

Re claim 18, Kajitani discloses all of the limitations of the base claim, but fail to disclose the primary source switch re-establishing the SPVx connection to the primary destination node when the failure condition clears. Shabtay discloses returning the traffic from one recovery path back to the working path (column 9, line 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani to implement the switchover function of Shabtay so that a given alternate path would be utilized for restoring other working path.

Re claim 19, Kajitani discloses the node N8 setting up alternate connection when the fault occurs on the primary route (*the primary destination switch releases the SPVx connection after there is a fault detected on single end-to-end connection*, column 16, lines 60-63).

Re claim 20, Kajitani discloses primary source switch making multiple attempts to reestablish the SPVx connection with the primary destination node after a failure is detected on the primary path (column 10, lines 5-10).

Re claim 21, Kajitani discloses N1 rerouting the connection to an alternate destination node via an alternate route (*primary source switch redirects automatically the SPVx connection to the alternate destination node*, figure 11).

Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Saleh and further in view of Pelissier.

Re claim 46, Kajitani and Saleh disclose all of the limitations of the base claim, but fail to disclose communicating between a primary source switch in communication with the primary source node and a alternate source switch in communication with an alternate source node to identify to the alternate source switch there is a failure in regard to the primary source node. Pelissier discloses a switch SW1 (*a primary source switch*) in communication with a node A (*the primary source node*) and a switch SW2 (*an alternate source switch*) in communication with a node C (*an alternate source node*) to identify to the alternate source switch there is a failure in regard to the primary source node. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Saleh to implement the redundant system of Pelissier so that in case of link failure on the working path or node failure end-to-end connection from an alternate node to an destination node would be maintained through a redundant path or switch.

Re claim 47, Kajitani and Saleh disclose all of the limitations of the base claim, but fail to disclose re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source node fails. Pelissier discloses re-establishing a connection from a node C (*an alternate source node*) to a node B (*a primary destination node*). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Saleh to implement the redundant system of Pelissier so that in case of node failure end-to-end connection from an alternate node to an destination node would be maintained through a redundant path or switch.

Re claim 48, Kajitani and Saleh disclose all of the limitations of the base claim, but fail to disclose re-establishing the SPVx connection from the alternate source node to the primary destination node when a link between the primary source node and the primary source switch fails. Pelissier discloses re-establishing a connection from a node C (*an alternate source node*) to a node B (*a primary destination node*) via a switch SW2 (*an alternate source switch*) when a link between node A and switch SW1 breaks. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Saleh to implement the redundant system of Pelissier so that in case of link failure end-to-end connection from an alternate node to a destination node would be maintained through a redundant switch.

Re claim 49, Kajitani and Saleh disclose all of the limitations of the base claim, but fail to disclose re-establishing the SPVx connection from the alternate source node to the primary destination node when the primary source switch fails. Pelissier discloses re-

establishing a connection from a node C (*an alternate source node*) to a node B (*a primary destination node*) via a switch SW2 (*an alternate source switch*). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani and Saleh to implement the redundant system of Pelissier so that in case of switch failure end-to-end connection from an alternate node to a destination node would be maintained through a redundant switch.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kajitani in view of Saleh and in view of Pelissier and further in view of Shabtay.

Re claim 52, Kajitani, Saleh and Pelissier disclose all of the limitations of the base claim, but fail to disclose the primary source switch re-establishing the SPVx connection to the primary destination node when the failure condition clears. Shabtay discloses returning the traffic from one recovery path back to the working path (column 9, line 1-3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kajitani, Saleh and Pelissier to implement the switchover function of Shabtay so that a given alternate path would be utilized for restoring other working path.

Allowable Subject Matter

10. Claims 11, 12, 27, 28, 50 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11, 27 and 50 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest alternate source switch re-establishing the SPVx connection from the primary source switch to the alternate source switch to the primary destination node through a primary portion of the alternate path of a network when a primary portion of the primary path through the network fails.

Claims 12, 28 and 51 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest alternate source switch re-establishing the SPVx connection from the alternate source switch to the primary source switch to the primary destination node through a primary portion of the primary path through the network when the primary source node fails and a primary portion of the alternate path through the network fails.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc
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3/14/07

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